UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,425	04/19/2001	Frederic Bauchot	FR920000031US1	3575

46033	7590	01/27/2005

IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT
11400 BURNET ROAD
AUSTIN, TX 78758

EXAMINER
STEVENS, ROBERT

ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>18 November 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-7</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>11/18/2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: **Application No. 09/838,425** amendment

filed 10/04/2004 to the original application filed 4/19/2001 by Bauchot et al. entitled "Method

and System in an Electronic Spreadsheet for Comparing Series of Cells". This application

claims foreign priority to application no. 00480059.5 filed in France on 7/13/2000.

2.   The Office withdraws the objections to the abstract raised in the First Action On the

Merits (FAOM), as a result of the amended specification.

3.   The Office withdraws the objections to the specification paragraph [0050] raised in the

FAOM, as a result of the amended specification.

4.   The Office maintains the other objections to the specification raised in the FAOM,

because the amended specification has not addressed them (i.e., chose to defer them).

5.   The Office withdraws the objections to the drawings raised in the FAOM, as a result of

the amended specification, with the exception of Fig. 5. The Office maintains the objections to

Fig. 5, because the disclosed flow chart appears to be technically incorrect. Only one possible

path is always followed in this flow chart, in addition to there being at least one

duplicated/superfluous step (#510 duplicates the initialization of A.Serie.TempAttribute). Refer

to the Drawings and 35 USC 112 first paragraph discussions below.

6.   The Office maintains the FAOM rejections of claims 1-7 under 35 USC 112 first

paragraph, in light of Applicant's amendment. This rejection has been restated below.

7.   The Office withdraws the FAOM rejections of claims 1-7 under 35 USC 112 second

paragraph, in light of Applicant's amendment.

8.   The Office withdraws the FAOM rejections of claims 1-7 under 35 USC 101, in light of

Applicant's amendment.

9.   The FAOM rejections of claims 1-7 under 35 USC 103(a) as being unpatentable over

Blood in view of Jamsa, has been withdrawn as necessitated by amendment.

10.   The Office raises new rejections of the claims under 35 USC 112 first and second

paragraphs, 35 USC 101 and 35 USC 103(a), as necessitated by amendment. Further discussion

follows.

11.   Claims 1-7 are pending. Claims 1 and 6 are independent.

Drawings

12.   The Office objects to Fig. 5 because algorithm presented in Fig. 5 appears to be

technically incorrect (initializing the same variable multiple times [see steps 505/510], and

resulting in one path always being followed through the flow chart [see step 515, which always

receives the following scenario: "True/False/False/True"]).

13.   Corrected drawing sheets are required in reply to the Office action to avoid abandonment

of the application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended.

The figure or figure number of an amended drawing should not be labeled as "amended." If a

drawing figure is to be canceled, the appropriate figure must be removed from the replacement

sheet, and where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency. Additional

replacement sheets may be necessary to show the renumbering of the remaining figures. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c) and 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in

abeyance.

Claim Rejections - 35 USC § 112

14.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

15.   **Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply

with the enablement requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, the preferred embodiment discloses a technically incorrect solution.

According to the procedure disclosed in Fig. 5, the resultant values for Atrue/Afalse/Btrue/Bfalse

are <u>ALWAYS</u> True/False/False/True. As such the only possible processing option for step # 515

is #518 "Result=DISJOINTED"

Translated into claim 1 limitations: "determining a first operation ..." is <u>always</u> true (Fig

5, step 506), "determining a second operation ..." is <u>always</u> false (Fig 5, step 511), and

"determining whether the first series ..." is <u>always</u> True/False/False/True, always resulting in the

DISJOINTED scenario, according to Fig 5 step 515.

Claims 2-5 are rejected by virtue of their dependency upon claim 1.

Claims 6-7 claim the system and computer readable medium subject matter forms which

embody claim 1, and therefore are rejected under the same rationale as per claim 1.

16.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

17.   **Claim 7 is rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Regarding claim 7, which is dependent upon amended claim 1, the term/phrase

"computer readable medium" was not defined in the specification. As such, the scope of this

claim is indeterminable.

Claim Rejections - 35 USC § 101

18. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

19. **Claims 6-7 are rejected under 35 U.S.C. 101** because the claimed invention is directed

to non-statutory subject matter.

Regarding independent claim 6: The language of this claim merely describes a

computer program per se. As such, this raises a question as to whether the claim is directed

merely to an abstract idea that is not tied to a technological art, environment or machine, which

would result in a practical application producing a concrete, useful and tangible result to form the

basis of statutory subject matter under 35 USC 101.

One technique for satisfying the requirements of 35 USC 101 is to claim code residing in

memory (i.e., hardware), wherein that code produces a tangible result.

Regarding claim 7: This claim is directed to a "computer readable medium", which may

encompass an intangible embodiment (such as a carrier wave or transmission media).

Claim Rejections - 35 USC § 103

20.　　The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

21.　　**Claims 1-7 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Julia Kelly

(Using Microsoft Excel 97, 3rd Edition, Que Corp., Indianapolis, IN, © 1998, pp. 138-144 and

154-189, hereafter referred to as "Kelly") in view of H. M. Deitel et al. (C++: How To Program,

2nd Edition, Prentice Hall, Upper Saddle River, NJ, © 1994, pp. 10, 106-110, 147, 243-244, 256-

262, 448, 473-479, 483-485, 707-730, 981-987 and 1043-1045, hereafter referred to as "Deitel").

The Microsoft Computer Dictionary, 4th Edition, Microsoft Press, Redmond, WA, © 1999, pp.

29, 56-58, 79, 229, 272, 420 and 434, hereafter referred to as " MS Dictionary", has also been

used to supply definitions for various computer terms.

　　　　　　　　Regarding independent claim 1, Kelly discloses:

> *A method of comparing two series of cells in a multi dimensional spreadsheet*
> *comprising a plurality of cells identified by a cell address along each dimension, a series*
> *of cells comprising one or a plurality of cell range, a cell range comprising one or a*
> *plurality of cells* (pp. 340-343 Figures 18.12-18.14 and especially the Fig. 18.15
> comparison summary), *said method comprising the steps of:*
> 　　　　　　*defining a boolean attribute, said boolean attribute having a first and a*
> *second value;* (pp. 174-175 "IF" section and Fig. 10.23, re: use of nested IF
> formula. The p. 58 MS Dictionary definition of boolean algebra discloses the

well known use of first [i.e., 0] and second [i.e., 1] boolean values as being false and true, respectively.);

... .

However, Kelly does not explicitly disclose:

...   .

assigning the first value of said boolean attribute to each cell of a first series of cells;

assigning the second value of said boolean attribute to each cell of a second series of cells;

determining in a first operation whether all the cells of said first series of cells share the same first value of said boolean attribute, or share the same second value of said boolean attribute or do not share a same single value of said boolean attribute;

for a second operation, again assigning the first value of said boolean attribute to each cell of the first series of cells;

determining in a second operation whether all the cells of the second series of cells share the same first value of said boolean attribute, or share the same second value of said boolean attribute or do not share a same single value of said boolean attribute;

recording intermediary information from the first operation and the second operation in a comparison table, stored in a memory of a computer;

determining whether the first series and the second series are the same or not by comparing results of the first operation and the second operation:

if all the cells of the first series share the same second value of said boolean attribute in said first operation and

if all the cells of the second series share the same first value of said boolean attribute in said second operation, the first series and the second series are the same.

Deitel, though, discloses:

...

assigning the first value of said boolean attribute to each cell of a first series of cells; (Assignment is well known in the art. See p. 243 code, esp. line 12.)

assigning the second value of said boolean attribute to each cell of a second series of cells; (Assignment is well known in the art. See p. 243 code, esp. line 12.)

determining in a first operation whether all the cells of said first series of cells share the same first value of said boolean attribute, or share the same

> second value of said boolean attribute or do not share a same single value of said
> boolean attribute; (p. 476 code block lines 102-114, esp. line 113 which is
> executed only when the compared array cells [i.e., series] are equal [i.e., the
> same])
>
> for a second operation, again assigning the first value of said boolean
> attribute to each cell of the first series of cells; (Assignment is well known in the
> art. See p. 243 code, esp. line 12.)
>
> determining in a second operation whether all the cells of the second
> series of cells share the same first value of said boolean attribute, or share the
> same second value of said boolean attribute or do not share a same single value
> of said boolean attribute; (p. 476 code block lines 102-114, esp. line 113 which is
> executed only when the compared array cells [i.e., series] are equal [i.e., the
> same])
>
> recording intermediary information from the first operation and the
> second operation in a comparison table, stored in a memory of a computer; (It is
> a matter of obvious design choice to create an additional array/table to store
> results. Pp. 243-244 code lines 12, 23 and 41-45 disclose creating and modifying
> [i.e., recording results in] an array data structure.)
>
> determining whether the first series and the second series are the same or
> not by comparing results of the first operation and the second operation: (p. 476
> code block lines 102-114, esp. line 113 which is executed only when the
> compared array cells [i.e., series] are equal [i.e., the same])
>
> if all the cells of the first series share the same second value of said
> boolean attribute in said first operation and if all the cells of the second series
> share the same first value of said boolean attribute in said second operation, the
> first series and the second series are the same. (p. 476 code block 109-113
> discloses comparing array cells for equality/similarity)

It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so

would enable a programmer to build reusable software components, as taught by Deitel in the 2nd

paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same

field of endeavor, i.e., application program use and development.

   Regarding claim 2, which is dependent upon claim 1, the limitations of claim 1 have

been previously addressed.

   However, Kelly does not explicitly disclose:

   *wherein the step of determining whether the first series and the second series are
the same or not comprises the further step of determining whether the first series and the
second series are disjoined or not by comparing the results of the first operation and the
second operation:*
    *if all the cells of the first series share the same first value of said boolean
attribute in said first operation and if all the cells of the second series share the
same second value of said boolean attribute in said second operation, the first
series and the second series are disjoined.*

   Deitel, though, discloses:

   *wherein the step of determining whether the first series and the second series are
the same or not comprises the further step of determining whether the first series and the
second series are disjoined or not by comparing the results of the first operation and the
second operation:*
    *if all the cells of the first series share the same first value of said boolean
attribute in said first operation and if all the cells of the second series share the
same second value of said boolean attribute in said second operation, the first
series and the second series are disjoined.* (p. 476 code block on lines 102-114,
esp. line 111, which returns when the compared ranges are not equal [i.e.,
disjoined])

   It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so

would enable a programmer to build reusable software components, as taught by Deitel in the 2nd

paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same

field of endeavor, i.e., application program use and development.

Regarding claim 3, which is dependent upon claim 2, the limitations of claim 2 have

been previously addressed.

However, Kelly does not explicitly disclose:

> *wherein the step of determining whether the first series and the second series are the same or not, comprises the further step of determining whether the first series and the second series overlap or not by comparing the results of the first operation and the second operation;*
>> *if all the cells of the first series do not share the same single value of said boolean attribute in said first operation and if all the cells of the second series do not share the same single value of said boolean attribute in said second operation, the first series and the second series overlap.*

Deitel, though, discloses:

> *wherein the step of determining whether the first series and the second series are the same or not, comprises the further step of determining whether the first series and the second series overlap or not by comparing the results of the first operation and the second operation;*
>> *if all the cells of the first series do not share the same single value of said boolean attribute in said first operation and if all the cells of the second series do not share the same single value of said boolean attribute in said second operation, the first series and the second series overlap.* (pp. 985-986 Fig. 20.31 code, esp. lines 21-38 disclosing comparison of values to table entries to determine if those values are found/included in the table [i.e., determine if there is overlap or a subset relationship). It is a matter of obvious design choice that the "values" can come from another table.)

It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so

would enable a programmer to build reusable software components, as taught by Deitel in the 2nd

paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same

field of endeavor, i.e., application program use and development.

Regarding claim 4, which is dependent upon claim 3, the limitations of claim 3 have

been previously addressed.

However, Kelly does not explicitly disclose:

> *wherein the step of determining whether the first series and the second series are the same or not, comprises the further step of determining whether the first series and the second series are included one in the other or not by comparing the results of the first operation and the second operation:*
>> *if all the cells of the first series share the same second value of said boolean attribute in said first operation and if all the cells of the second series do not share the same single value of said boolean attribute in said second operation, the first series is included in the second series;*
>> *if all the cells of the first series do not share the same single value of said boolean attribute in said first operation and if all the cells of the second series share the same first value of said boolean attribute in said second operation, the second series is included in the first series.*

Deitel, though, discloses:

> *wherein the step of determining whether the first series and the second series are the same or not, comprises the further step of determining whether the first series and the second series are included one in the other or not by comparing the results of the first operation and the second operation:*
>> *if all the cells of the first series share the same second value of said boolean attribute in said first operation and if all the cells of the second series do not share the same single value of said boolean attribute in said second operation, the first series is included in the second series;*
>> *if all the cells of the first series do not share the same single value of said boolean attribute in said first operation and if all the cells of the second series share the same first value of said boolean attribute in said second operation, the second series is included in the first series.* (pp. 985-986 Fig. 20.31 code, esp. lines 21-38 disclosing comparison of values to table entries to determine if those values are found/included in the table [i.e., determine if there is overlap or a subset relationship). It is a matter of obvious design choice that the "values" can come from another table.)

It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so

would enable a programmer to build reusable software components, as taught by Deitel in the 2nd

paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same

field of endeavor, i.e., application program use and development.

Regarding claim 5, which is dependent upon claim 1, the limitations of claim 1 have

been previously addressed.

However, Kelly does not explicitly disclose:

> *wherein said boolean attribute is temporary.*

Deitel, though, discloses:

> *wherein said boolean attribute is temporary.* (p. 147 Fig. 20.31 "3.4
> Functions" 1st sentence discussing local variables. It is well known in the art that
> the scope of local variables is limited [i.e., temporary].)

It would have been obvious to one of ordinary skill in the art at the time of the invention

to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so

would enable a programmer to build reusable software components, as taught by Deitel in the 2nd

paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same

field of endeavor, i.e., application program use and development.

Claim 6 is directed to a system comprising the means for implementing the method set

forth in claim 1. As such, claim 6 is substantially similar to claim 1, and therefore likewise

rejected.

Claim 7 is directed to a computer readable medium comprising instructions for

implementing the method set forth in claim 1. As such, claim 7 is substantially similar to claim

1, and therefore likewise rejected.

Response to Arguments

22.   Applicant's arguments filed 10/04/2004 have been fully considered but they are not

persuasive.

Applicant's remarks on pages 9-11 of the amendment concerning the drawings and

specification issues raised in the FAOM have been addressed above.

It is respectfully noted that Applicant's amendment to the claims significantly changes

the scope of the claimed invention as a whole. As such, Applicant's arguments (pages 11-15 of

the amendment) concerning FAOM rejections under 35 USC 101, 35 USC 102(b) and 103(a)

have been rendered moot.

Conclusion

23.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US Patents

Coffen et al	6,640,234
Ammirato et al	6,438,565
Anderson et al	6,282,551
Michelman et al	5,987,481
Freivald et al	5,983,268
Goodridge et al	5,848,393
Moss et al	5,613,131
Cseri	5,883,623
Glassey	5,604,854

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens
Art Unit 2176
Date: January 21, 2005

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

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